

## KAATSU TRAINING: PERCEPTIONS AND COMPLIANCE TO AN UPPER ARM EXERCISE PROGRAM

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KAATSU training is a novel Japanese training mode involving low load (~20% maximal strength) weightlifting combined with blood flow restriction to the muscles. Little is known about the sensations experienced during KAATSU training and whether clients will tolerate it. The purpose of this study was to assess perceived sensations, exertion rates, and compliance to an upper arm KAATSU training program. Forty healthy subjects ages 18 to 30 were divided into exercise (EX) or control (CON) groups. Subjects reported to the laboratory three times per week for eight weeks. The EX group performed 3 sets of 15 repetitions of unilateral bicep curls and triceps extensions lifting loads equivalent to 20% of their predetermined maximal strength while wearing a pneumatic cuff on one arm (CUFF) and nothing on the other (NCUFF). The CON group did not perform any exercises but wore the cuff on one arm for a time comparable to the EX group. CUFF and NCUFF arms were randomly assigned. Sensations (burning, aching, pressure, pins & needles) and perceived exertion were assessed using visual analog scales that included emotions and verbal cues. Compliance (percentage of subjects completing the pre- and post-testing) and adherence (percentage of sessions completed) were tracked to provide an indication of training tolerance. Compliance was 85.4% and 97% for the EX and CON groups, respectively. EX subjects completed 85.4% of their workouts while controls attended 90.4% of their sessions. The prominent sensation reported in the CUFF arm was pressure (moderate;  $3.2 \pm 0.6$ ) followed by aching (weak;  $1.7 \pm 0.4$ ). Ratings of perceived exertion were higher for the CUFF ( $3.2 \pm 1.0$ ,  $5.1 \pm 1.8$ , and  $7.0 \pm 2.5$ ) versus NCUFF ( $1.5 \pm 0.3$ ,  $2.4 \pm 0.3$ , and  $3.3 \pm 0.4$ ) arm for sets 1, 2, and 3, respectively. KAATSU training is well tolerated by those performing it and a viable alternative to conventional resistance exercise.

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